Appendix J

Greenhouse Gas Regulatory Setting

Appendix J: Modified Project Greenhouse Gas Regulatory Setting

Since the certification of the Certified EIR in 2011, numerous regulatory changes have occurred that are pertinent to the study of GHG impacts under CEQA. The following discussion summarizes the current regulatory framework surrounding GHG emissions to inform the analysis of the Modified Project's potential GHG impacts.

(1) Federal

(a) Federal Clean Air Act

The U.S. Supreme Court ruled in *Massachusetts v. Environmental Protection Agency*, 127 S.Ct. 1438 (2007), that CO_2 and other GHGs are pollutants under the federal Clean Air Act, which the United States Environmental Protection Agency (USEPA) must regulate if it determines they pose an endangerment to public health or welfare. The U.S. Supreme Court did not mandate that the USEPA enact regulations to reduce GHG emissions. Instead, the court found that the USEPA could avoid taking action if it found that GHGs do not contribute to climate change or if it offered a "reasonable explanation" for not determining that GHGs contribute to climate change.

On April 17, 2009, the USEPA issued a proposed finding that GHGs contribute to air pollution that may endanger public health or welfare. On April 24, 2009, the proposed rule was published in the Federal Register under Docket ID No. EPA-HQ-OAR-2009-0171. The USEPA stated that high atmospheric levels of GHGs "are the unambiguous result of human emissions, and are very likely the cause of the observed increase in average temperatures and other climatic changes." The USEPA further found that "atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202 of the Clean Air Act." The findings were signed by the USEPA Administrator on December 7, 2009. The final findings were published in the Federal Register on December 15, 2009. The final rule was effective on January 14, 2010.[1] While these findings alone do not impose any requirements on industry or other entities, this

[1] *United States Environmental Protection Agency, Climate Change, www.epa.gov/climatechange/, accessed March 1, 2015.*

action is a prerequisite to regulatory actions by the USEPA, including but not limited to GHG emissions standards for light-duty vehicles.

On July 20, 2011, the USEPA published its final rule deferring GHG permitting requirements for carbon dioxide emission from biomass-fired and other biogenic sources until July 21, 2014. Environmental groups have challenged the deferral. In September 2011, the USEPA released an "Accounting Framework for Biogenic CO_2 Emissions from Stationary Sources," which analyzes accounting methodologies and suggests an implementation for biogenic carbon dioxide emitted from stationary sources.

On April 4, 2012, the USEPA published a proposed rule to establish, for the first time, a new source performance standard for GHG emissions. Under the proposed rule, new fossil fuel–fired electric generating units larger than 25 MW would be required to limit emissions to 1,000 pounds CO2/MWh on an average annual basis, subject to certain exceptions.

On April 17, 2012, the USEPA issued emission rules for oil production and natural gas production and processing operations.

(b) Federal Corporate Average Fuel Economy (CAFE) Standards

In response to the 2007 U.S. Supreme Court ruling discussed above, the Bush Administration issued Executive Order 13432 directing the USEPA, the Department of Transportation (DOT), and the Department of Energy (DOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency for and GHG emissions from cars and light-duty trucks for model year 2011; and, in 2010, the USEPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Obama issued a memorandum directing the DOT, DOE, USEPA and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams/mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon (mpg) if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.[2]

(c) Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;

- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;

- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and

- While superseded by the USEPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."

[2] *The emission reductions attributable to the regulations for medium- and heavy-duty trucks were not included in the Project's emissions inventory due to the difficulty in quantifying the reductions. Excluding these reductions results in a more conservative (i.e., higher) estimate of emissions for the Project.*

(2) State

(a) Executive Order S-3-05

Executive Order S-3-05, issued in June 2005, established GHG emissions targets for the State, as well as a process to ensure the targets are met. The order directed the Secretary for California EPA to report every two years on the State's progress toward meeting the Governor's GHG emission reduction targets. As a result of this executive order, the California Climate Action Team, led by the Secretary of the California EPA, was formed. The California Climate Action Team is made up of representatives from a number of State agencies and was formed to implement global warming emission reduction programs and reporting on the progress made toward meeting statewide targets established under the Executive Order. The California Climate Action Team reported several recommendations and strategies for reducing GHG emissions and reaching the targets established in the Executive Order.[3] The statewide GHG targets are as follows:

- By 2010, reduce to 2000 emission levels;
- By 2020, reduce to 1990 emission levels; and
- By 2050, reduce to 80 percent below 1990 levels.

However, in adopting the California Global Warming Solutions Act of 2006 (also known as AB 32), discussed below, the Legislature did not adopt the 2050 horizon-year goal from Executive Order No. S-3-05.[4]

The California Climate Action Team stated that smart land use is an umbrella term for strategies that integrate transportation and land-use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development (TOD), and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population. "Intelligent transportation systems" is the application of advanced

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[3] *California Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006.*

[4] *See Cleveland National Forest Foundation v. San Diego Association of Governments (2014) 231 Cal.App.4th 1056, 1096; Professional Engineers in California Government v. Schwarzenegger (2010) 50 Cal.4th 989, 1015; and see Office of Planning and Research, Guide to the California State Executive Branch (Oct. 2004), p. 8.*

technology systems and management strategies to improve operational efficiency of transportation systems and the movement of people, goods, and service.[5]

(b) California Global Warming Solutions Act of 2006 (AB 32)

The California Global Warming Solutions Act of 2006 (also known as AB 32) commits the State to achieving the following:

- By 2010, reduce to 2000 GHG emission levels ; and
- By 2020, reduce to 1990 levels.

To achieve these goals, which are consistent with the California Climate Action Team GHG targets for 2010 and 2020, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources consistent with the California Climate Action Team strategies, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. In order to achieve the reduction targets, AB 32 requires CARB to adopt rules and regulations in an open public process that achieve the maximum technologically feasible and cost-effective GHG reductions.[6]

(c) Climate Change Scoping Plan

In 2008, CARB approved a *Climate Change Scoping Plan* as required by AB 32.[7] The *Climate Change Scoping Plan* proposes a "comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health."[8] The *Climate Change Scoping Plan* has a range of GHG reduction actions which include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and an AB 32 implementation fee to fund the program.

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[5] *California Environmental Protection Agency, Climate Action Team Report to Governor Schwarzenegger and the Legislature, March 2006, p. 58.*

[6] *CARB's list of discrete early action measures that could be adopted and implemented before January 1, 2010, was approved on June 21, 2007. The three adopted discrete early action measures are: (1) a low-carbon fuel standard, which reduces carbon intensity in fuels state-wide; (2) reduction of refrigerant losses from motor vehicle air conditioning system maintenance; and (3) increased methane capture from landfills, which includes requiring the use of state-of-the-art capture technologies.*

[7] *Climate Change Proposed Scoping Plan was approved by CARB on December 11, 2008.*

[8] *Climate Change Scoping Plan, CARB, December 2008, www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm, accessed March 1, 2015.*

The *Climate Change Scoping Plan* calls for a "coordinated set of solutions" to address all major categories of GHG emissions. Transportation emissions will be addressed through a combination of higher standards for vehicle fuel economy, implementation of the Low Carbon Fuel Standard, and greater consideration to reducing trip length and generation through land use planning and transit-oriented development. Buildings, land use, and industrial operations will be encouraged and, sometimes, required to use energy more efficiently. Utility energy supplies will change to include more renewable energy sources through implementation of the Renewables Portfolio Standard.[9] Additionally, the *Climate Change Scoping Plan* emphasizes opportunities for households and businesses to save energy and money through increasing energy efficiency. It indicates that substantial savings of electricity and natural gas will be accomplished through "improving energy efficiency by 25 percent."

The *Climate Change Scoping Plan* identifies a number of specific issues relevant to the proposed Project including:

- The potential of using the green building framework as a mechanism which could enable GHG emissions reductions in other sectors (i.e., electricity, natural gas), noting that:

  > "A Green Building strategy will produce greenhouse gas saving through buildings that exceed minimum energy efficiency standards, decrease consumption of potable water, reduce solid waste during construction and operation, and incorporate sustainable materials. Combined, these measures can also contribute to healthy indoor air quality, protect human health, and minimize impacts to the environment."

- The importance of supporting the Department of Water Resources' work to implement the Governor's objective to reduce per capita water use by 20 percent by 2020. Specific measures to achieve this goal include water use efficiency, water recycling, and reuse of urban runoff. The *Climate Change Scoping Plan* notes that water use requires significant amounts of energy, including approximately one-fifth of state-wide electricity.

- Encouraging local governments to set quantifiable emission reduction targets for their jurisdictions and use their influence and authority to encourage reductions in emissions caused by energy use, waste and recycling, water and wastewater systems, transportation, and community design.

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[9] *For a discussion of Renewables Portfolio Standard, refer to subsection 2(f), California Renewables Portfolio Standard.*

Forecasting the amount of emissions that would occur in 2020 if no actions are taken was necessary to assess the scope of the reductions California has to make to return to the 1990 emissions level by 2020 as required by AB 32. The no-action scenario is known as "business-as-usual" or BAU. The California Air Resources Board originally defined the BAU scenario as emissions in the absence of any GHG emission reduction measures discussed in the Climate Change Scoping Plan. For example, in further explaining CARB's BAU methodology, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards. In the Scoping Plan, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent from the otherwise projected 2020 emissions level; i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations.[10]

Subsequent to adoption of the *Climate Change Scoping Plan*, a lawsuit was filed challenging CARB's approval of the *Climate Change Scoping Plan Functional Equivalent Document* (*FED to the Climate Change Scoping Plan*). On May 20, 2011 (Case No. CPF-09-509562), the court found that the environmental analysis of the alternatives in the *FED to the Climate Change Scoping Plan* was not sufficient under CEQA. CARB staff prepared a revised and expanded environmental analysis of the alternatives and the *Supplemental FED to the Climate Change Scoping Plan* was approved on August 24, 2011 (*Supplemental FED*). The *Supplemental FED* indicated that there is the potential for adverse environmental impacts associated with implementation of the various GHG emission reduction measures recommended in the *Climate Change Scoping Plan*.

As part of the *Supplemental FED*, CARB updated the projected 2020 BAU emissions inventory based on current economic forecasts (i.e., as influenced by the economic downturn) and emission reduction measures already in place, replacing its prior 2020 BAU emissions inventory. CARB staff derived the updated emissions estimates by projecting emissions growth, by sector, from the state's average emissions from 2006-2008. . Specific emission reduction measures included are the million-solar-roofs program, the AB 1493 (Pavley I) motor vehicle GHG emission standards, and the Low Carbon Fuels Standard.[11] In addition, CARB has factored into the 2020 BAU inventory emissions reductions associated with 33-percent Renewable Energy Portfolio Standard (RPS) for electricity generation. Based on the new economic data, CARB determined that achieving

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[10] *CARB, Climate Change Scoping Plan: A Framework for Change, p. 12, December 2008.*

[11] *Pavley I are the first GHG standards in the nation for passenger vehicles and took effect for model years starting in 2009 to 2016. Pavley I could potentially result in 27.7 million metric tonnes CO_2e reduction in 2020. Pavley II will cover model years 2017 to 2025 and potentially result in an additional reduction of 4.1 million metric tonnes CO_2e.*

the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 percent (down from 28.5 percent) from BAU conditions. When the 2020 emissions level projection also was updated to account for newly implemented regulatory measures discussed above, CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16 percent (down from 28.5 percent) from the BAU conditions.[12,13] Part IV.B.3.b.3 herein contains additional discussion of the *Supplemental FED*, the updated BAU estimate, and the required reduction from BAU to meet AB 32's mandate.

Most recently, in 2014, CARB adopted the *First Update to the Climate Change Scoping Plan: Building on the Framework* (First Update).[14] The stated purpose of the First Update is to "highlight […] California's success to date in reducing its GHG emissions and lay […] the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050."[15] The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32, and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the State realizes the expected benefits of existing policy goals. [16]

In conjunction with the First Update, CARB identified "six key focus areas comprising major components of the State's economy to evaluate and describe the larger transformative actions that will be needed to meet the State's more expansive emission reduction needs by 2050."[17] Those six areas are: (1) energy; (2) transportation (vehicles/ equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and (6) natural and working lands. The First Update

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[12] *CARB, Supplement to the AB 32 Scoping Plan FED, Table 1.2-2, Updated 2020 Business-as-Usual Emissions Forecast, www.arb.ca.gov/cc/scopingplan/document/final_supplement_to_sp_fed.pdf, accessed March 2, 2015.*

[13] *The emissions and reductions estimates found in the Supplemental FED to the Climate Change Scoping Plan fully replace the estimates published in the 2008 Climate Change Scoping Plan. See CARB, Resolution 11-27 (Aug. 24, 2011) (setting aside approval of 2008 Climate Change Scoping Plan and associated emissions forecasts, and approving the Supplemental FED). The estimates in the 2008 document are: 596 million metric tonnes CO_2e under 2020 BAU and a required reduction of 169 million metric tonnes CO_2e (28.4 percent).*

[14] *Health & Safety Code §38561(h) requires CARB to update the Scoping Plan every five years.*

[15] *CARB, First Update, p. 4, May 2014.*

[16] *CARB, First Update, p. 34, May 2014.*

[17] *CARB, First Update, p. 6, May 2014.*

identifies key recommended actions for each sector that will facilitate achievement of the 2050 reduction target.

Based on CARB's research efforts, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050."[18] Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

The First Update discusses new residential and commercial building energy efficiency improvements, specifically identifying progress towards zero net energy buildings as an element of meeting mid-term and long-term GHG reduction goals. The First Update expresses CARB's commitment to working with the California Public Utilities Commission and California Energy Commission to facilitate further achievements in building energy efficiency.

(d) Executive Order B-30-15

On April 29, 2015, California Governor Jerry Brown issued Executive Order B-30-15. Therein, Governor Brown:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030;
- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets; and
- Directed CARB to update the *Climate Change Scoping Plan* to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

CARB subsequently expressed its intention to initiate the *Climate Change Scoping Plan* update during the Summer of 2015, with adoption intended for 2016.

(e) Cap-and-Trade Program

The *Climate Change Scoping Plan* identifies a cap-and-trade program as one of the strategies for California to reduce GHG emissions. According to CARB, a cap-and-trade program will help put California on the path to meet its goal of reducing GHG emissions to

[18] *CARB, First Update, p. 32, May 2014.*

1990 levels by the year 2020 and ultimately achieving an 80-percent reduction from 1990 levels by 2050. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap will be able to trade permits to emit GHGs within the overall limit.

CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. The Cap-and-Trade Program[19] is designed to reduce GHG emissions from major sources (deemed "covered entities") by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve AB 32's emission-reduction mandate of returning to 1990 levels of emissions by 2020. The statewide cap for GHG emissions from the capped sectors[20] (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and will decline over time, achieving GHG emission reductions throughout the program's duration.

Covered entities that emit more than 25.000 $MTCO_2e$ per year must comply with the Cap-and-Trade Program.[21] Triggering of the 25.000 $MTCO_2e$ per year "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Mandatory Reporting Rule or "MRR").[22]

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period[23] and distributes these to regulated entities. Covered entities are allocated free allowances in whole or part (if eligible), and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender "compliance instruments"[24] for each $MTCO_2e$ of GHG they emit. There also are requirements to surrender compliance instruments covering 30 percent of the prior year's compliance obligation by November of each year. For example, in November 2014, a covered entity was required to submit compliance instruments to cover 30 percent of its 2013 GHG emissions.

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[19] *17 CCR §§ 95800 to 96023.*

[20] *See, generally, 7 CCR §§ 95811 and 95812.*

[21] *17 CCR § 95812.*

[22] *17 CCR §§ 95100–95158.*

[23] *A "compliance period" is the time frame during which the compliance obligation is calculated. The years 2013 and 2014 are the first compliance period, the years 2015–2017 are the second compliance period, and the third compliance period is from 2018–2020.*

[24] *Compliance instruments are permits to emit the majority of which will be "allowances," but entities also are allowed to use CARB-approved offset credits to meet up to 8 percent of their compliance obligations.*

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 statewide emission limit will not be exceeded. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by CARS in the First Update:

> *The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced.*[25]

In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative.

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions.[26] If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. Thus. the Cap-and-Trade Program assures that California will meet its 2020 GHG emissions reduction mandate:

> *The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the "capped sectors." Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency standards, the [Low Carbon Fuel Standard] LCFS, and the 33 percent [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together, direct regulation*

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[25] *CARB. First Update to the Climate Change Scoping Plan: Building on the Framework at 86 (May 2014) (emphasis added).*

[26] *Id.*

> *and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap.*[27] *[…]*
>
> *[T]he Cap-and-Trade Regulation provides assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85 percent of California's GHG emissions.*[28]

In sum, the Cap-and-Trade Program will achieve aggregate, rather than site-specific or project-level, GHG emissions reductions. Also, due to the regulatory architecture adopted by CARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the State's emissions forecasts and the effectiveness of direct regulatory measures.

As of January 1, 2015, the Cap-and-Trade Program covered approximately 85 percent of California's GHG emissions.

The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported.[29] Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program.

The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period.[30] While the Cap-and-Trade Program technically covered fuel suppliers as early as 2012, they did not have a compliance obligation (i.e., they were not fully regulated) until 2015.[31]

The Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. The point of regulation for transportation fuels is when they are "supplied" (i.e., delivered into commerce). Accordingly, as with stationary source GHG emissions and GHG emissions

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[27] *Id., at 88.*

[28] *Id., at 86–87.*

[29] *17 CCR § 95811(b).*

[30] *17 CCR §§ 95811 and 95812(d).*

[31] *Id., at § 95851(b) (emphasis added).*

attributable to electricity use, virtually all, if not all, of GHG emissions from CEQA projects associated with vehicle-miles traveled (VMT) are covered by the Cap-and-Trade Program.

(f) Sources Related to Energy Utility Consumption

(i) California Renewables Portfolio Standard

The California Renewables Portfolio Standard (RPS) program (2002, Senate Bill [SB] 1078) requires that 20 percent of the available energy supplies are from renewable energy sources by 2017. In 2006, SB 107 accelerated the 20 percent mandate to 2010. These mandates apply directly to investor-owned utilities. On April 12, 2011, California Governor Jerry Brown signed into law Senate Bill 2X, which modified California's RPS program to require that both public and investor-owned utilities in California receive at least 33 percent of their electricity from renewable sources by the year 2020. California Senate Bill 2X also requires regulated sellers of electricity to meet an interim milestone of procuring 25 percent of their energy supply from certified renewable resources by 2016. These levels of reduction are consistent with the Los Angeles Department of Water and Power's (LADWP) commitment to achieve 35 percent renewables by 2020.

In 2014, LADWP indicated that 20 percent of its electricity came from renewable resources in Year 2012. Therefore, under Senate Bill 2X, LADWP must increase its electricity from renewable resources by an additional 13 percent to comply with the RPS of 33 percent.[32]

(ii) California Senate Bill 1368

California SB 1368, a companion bill to AB 32, requires the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) to establish GHG emission performance standards for the generation of electricity. These standards will also generally apply to power that is generated outside of California and imported into the State. SB 1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB 32. On January 25, 2007, the CPUC adopted an interim GHG Emissions Performance Standard, which is a facility-based emissions standard requiring that all new long-term commitments for baseload generation to serve California consumers be with power plants that have GHG emissions no greater than a combined cycle gas turbine plant. That level is established at 1,100 pounds of CO_2 per megawatt-hour. Further, on May 23, 2007, the CEC adopted regulations that establish and implement an identical Emissions Performance Standard of 1,100 pounds of CO_2 per megawatt-hour (see CEC Order No. 07-523-7).

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[32] *Website www.ladwpnews.com/go/doc/1475/987799/.*

(g) Mobile Sources

(i) California Assembly Bill 1493

Assembly Bill 1493, passed in 2002, requires the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. CARB originally approved regulations to reduce GHGs from passenger vehicles in September 2004, with the regulations to take effect in 2009. On September 24, 2009, CARB adopted amendments to these "Pavley" regulations that reduce GHG emissions in new passenger vehicles from 2009 through 2016.[33] Although setting emission standards on automobiles is solely the responsibility of the USEPA, the Federal Clean Air Act allows California to set state-specific emission standards on automobiles if the state first obtains a waiver from the USEPA. The USEPA granted California that waiver on July 1, 2009. A comparison between the Assembly Bill 1493 standards and the Federal Corporate Average Fuel Economy was completed by CARB and is available at www.arb.ca.gov/cc/ccms/reports/ab1493_v_cafe_study.pdf. The emission standards become increasingly more stringent through the 2016 model year. California is also committed to further strengthening these standards beginning with 2020 model year vehicles to obtain a 45 percent GHG reduction in comparison to the 2009 model year.

(ii) Executive Order S-1-07 (California Low Carbon Fuel Standard)

Executive Order S-1-07, the Low Carbon Fuel Standard (issued on January 18, 2007), requires a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020. Regulatory proceedings and implementation of the Low Carbon Fuel Standard have been directed to CARB. The Low Carbon Fuel Standard has been identified by CARB as a discrete early action item in the adopted *Climate Change Scoping Plan* (discussed in Section IV.B.2.2.c(2)(e) below.) CARB expects the Low Carbon Fuel Standard to achieve the minimum 10 percent reduction goal; however, many of the early action items outlined in the *Climate Change Scoping Plan* work in tandem with one another. To avoid the potential for double-counting emission reductions associated with AB 1493 (see previous discussion), the *Climate Change Scoping Plan* has modified the aggregate reduction expected from the Low Carbon Fuel Standard to 9.1 percent. In accordance with the *Climate Change Scoping Plan*, this analysis incorporates the modified reduction potential for the Low Carbon Fuel Standard. CARB released a draft version of the Low Carbon Fuel Standard in October 2008. The final regulation was approved by the Office of Administrative Law and filed with the Secretary of State on January 12, 2010; the Low Carbon Fuel Standard became effective on the same day.

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[33] *Clean Car Standards—Pavley, Assembly Bill 1493, available at www.arb.ca.gov/cc/ccms/ccms.htm, accessed March 2, 2015.*

(iii) Advanced Clean Cars Regulations

In 2012, CARB approved the Advanced Clean Cars (ACC) program, a new emissions-control program for model years 2017–2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

(iv) California Senate Bill 375

Acknowledging the relationship between land use planning and transportation sector GHG emissions, California SB 375 was passed by the State Assembly on August 25, 2008, and signed by the Governor on September 30, 2008. This legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32. Reductions in GHG emissions would be achieved by, for example, locating employment opportunities close to transit. Under the bill, each Metropolitan Planning Organization would be required to adopt a Sustainable Community Strategy (SCS) to encourage compact development that reduce passenger vehicle miles traveled and trips so that the region will meet a target, created by CARB, for reducing GHG emissions. Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plan) are not required to be consistent with either that region's Region Transportation Plan or SCS. If the SCS is unable to achieve the regional GHG emissions reduction targets, then the Metropolitan Planning Organization is required to prepare an alternative planning strategy that shows how the GHG emissions reduction target could be achieved through alternative development patterns, infrastructure, and/or transportation measures.

(h) Building Standards

(i) Title 24 Energy Efficiency Standards

California's Energy Efficiency Standards for Residential and Nonresidential Buildings, located at Title 24, Part 6 of the California Code of Regulations and commonly referred to as "Title 24," were established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.[34]

[34] *See www.energy.ca.gov/title24/ for additional information, accessed March 2, 2015.*

An update to Title 24 was adopted by the CEC on April 23, 2008. The 2008 standards apply to building permits for which an application was submitted on or after January 1, 2010. The CEC adopted the 2008 changes to the Building Energy Efficiency Standards to respond to the mandates of AB 32 and to pursue California energy policy that energy efficiency is the resource of first choice for meeting California's energy needs. More recently, the CEC adopted the 2013 standards, which will be effective on January 1, 2014.[35] The 2013 standards will continue to improve upon the current 2008 standards for new construction of, and additions and alternations to, residential and nonresidential buildings.[36]

(ii) California Green Building Standards (CALGreen Code)

The California Green Building Standards Code, which is Part 11 of the California Code of Regulations, is commonly referred to as the CALGreen Code. The 2008 edition, the first edition of the CALGreen Code, contained only voluntary standards. The 2010 CALGreen Code is a code with mandatory requirements for State-regulated buildings, and structures throughout California beginning on January 1, 2011. The 2010 CALGreen Code contains requirements for construction site selection, storm water control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning which is a process for the verification that all building systems, like heating and cooling equipment and lighting systems are functioning at their maximum efficiency.

The 2013 CALGreen Code went into effect on July 1, 2014. There are a number of important updates in the 2013 code, such as: (1) an extensive update of California`s Energy Code; (2) updated CALGreen-requirements for nonresidential building alterations and additions; and (3) new plumbing code provisions pertaining to greywater and rainwater catchments.

(i) California Senate Bill 97

On June 19, 2008, the California Office of Planning and Research (OPR) released a technical advisory on addressing climate change. This guidance document outlines suggested components to CEQA disclosure: quantification of GHG emissions from a project's construction and operation; determination of significance of the project's impact to

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[35] *See www.energy.ca.gov/title24/ for additional information, accessed March 2, 2015.*

[36] *See www.energy.ca.gov/title24/2013standards/index.html, accessed March 2, 2015.*

climate change; and if the project is found to be significant, the identification of suitable alternatives and mitigation measures.

California Senate Bill 97, passed in August 2007, is designed to work in conjunction with the California Environmental Quality Act (CEQA) and AB 32. Senate Bill 97 requires the OPR to prepare and develop guidelines for the mitigation of GHG emissions or the effects thereof, including but not limited to effects associated with transportation and energy consumption. These guidelines were required to be transmitted to the California Natural Resources Agency by July 1, 2009, to be certified and adopted by January 1, 2010. The OPR submitted the Proposed Draft Guideline Amendments for Greenhouse Gas Emissions to the Secretary for Natural Resources on April 13, 2009. The California Natural Resources Agency conducted formal rulemaking in 2009 and adopted the Guideline Amendments on December 30, 2009, which address the specific obligations of public agencies when analyzing GHG emissions under CEQA to determine a project's effects on the environment.

However, neither a threshold of significance nor any specific mitigation measures are included or provided in these CEQA Guideline Amendments.[37] The Guideline Amendments require a lead agency to make a good-faith effort, based on the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. The Guideline Amendments give discretion to the lead agency whether to: (1) use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use; and/or (2) rely on a qualitative analysis or performance-based standards. Further, the Guideline Amendments identify three factors that should be considered in the evaluation of the significance of GHG emissions:

1. The extent to which a project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and

[37] *See 14 Cal. Code Regs. §§ 15064.7 (generally giving discretion to lead agencies to develop and publish thresholds of significance for use in the determination of the significance of environmental effects), 15064.4 (giving discretion to lead agencies to determine the significance of impacts from GHGs).*

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.[38]

The administrative record of the promulgation of the Guidelines Amendments also clarifies "that the effects of greenhouse gas emissions are cumulative, and should be analyzed in the context of California Environmental Quality Act's requirements for cumulative impact analysis."[39]

The California Natural Resources Agency is required to periodically update the guidelines to incorporate new information or criteria established by CARB pursuant to AB 32. Senate Bill 97 applies retroactively to any environmental impact report, negative declaration, mitigated negative declaration, or other document required by CEQA, which has not been finalized.

(3) Regional

(a) South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" on April 6, 1990. The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan (AQMP). In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

- Phase out the use and corresponding emissions of chlorofluorocarbons, methyl chloroform (1,1,1-trichloroethane or TCA), carbon tetrachloride, and halons by December 1995;
- Phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons by the year 2000;
- Develop recycling regulations for hydrochlorofluorocarbons (e.g., SCAQMD Rules 1411 and 1415);
- Develop an emissions inventory and control strategy for methyl bromide; and

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[38] *14 Cal. Code Regs. § 15064.4(b).*

[39] *Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources (April 13, 2009).*

- Support the adoption of a California GHG emission reduction goal.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds.[40] Within its October 2008 document, the SCAQMD proposed the use of a percent emission reduction target to determine significance for commercial/ residential projects that emit greater than 3,000 metric tonnes per year. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for stationary source/industrial projects where the SCAQMD is lead agency. However, the SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., residential/commercial projects) and has formed a GHG Significance Threshold Working Group to further evaluate potential GHG significance thresholds.[41] The aforementioned Working Group has been inactive since 2011.

(b) Southern California Association of Governments

On April 4, 2012, the Regional Council of the Southern California Association of Governments (SCAG) adopted the 2012–2035 Regional Transportation Plan/Sustainable Communities Strategy: Towards a Sustainable Future (2012–2035 RTP/SCS). Within the RTP, the SCS demonstrates the region's ability to attain and exceed the GHG emission-reduction targets set forth by the CARB. The SCS outlines the region's plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. The regional vision of the SCS maximizes current voluntary local efforts that support the goals of SB 375, as evidenced by several Compass Blueprint Demonstration Projects and various county transportation improvements. The SCS focuses the majority of new housing and job growth in high-quality transit areas and other opportunity areas in existing main streets, downtowns, and commercial corridors, resulting in an improved jobs-housing balance and more opportunity for transit-oriented development. This overall land use development pattern supports and complements the proposed transportation network that emphasizes system preservation, active transportation, and transportation demand management measures. Finally, the 2012–2035 RTP/SCS fully integrates the two subregional SCSs prepared by the Gateway Cities and Orange County Council of Governments with the rest of SCAG's jurisdiction. On June 4, 2012, CARB accepted SCAG's quantification of GHG emission reductions from the 2012–2035 RTP/SCS and the

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[40] *South Coast Air Quality Management District, Draft Guidance Document—Interim CEQA Greenhouse Gas (GHG) Significance Threshold, Attachment E, October 2008, Website www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf?sfvrsn=2, accessed March 2, 2015.*

[41] *South Coast Air Quality Management District. Greenhouse Gases (GHG) CEQA Significance Thresholds, Web site www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook, accessed March 2, 2015.*

determination that the 2012–2035 RTP/SCS would, if implemented, achieve the 2020 and 2035 GHG emission reduction targets established by CARB.[42]

(4) Local

(a) City of Los Angeles Green LA Action Plan

The City of Los Angeles has begun to address the issue of global climate change by publishing *Green LA, An Action Plan to Lead the Nation in Fighting Global Warming* ("LA Green Plan"). This document outlines the goals and actions the City has established to reduce the generation and emission of GHGs from both public and private activities. According to the LA Green Plan, the City of Los Angeles is committed to the goal of reducing emissions of CO_2 to 35 percent below 1990 levels. To achieve this, the City will:

- Increase the generation of renewable energy;
- Improve energy conservation and efficiency; and
- Change transportation and land use patterns to reduce dependence on automobiles.

(b) City of Los Angeles Green Building Ordinance

On December 15, 2010, the Los Angeles City Council approved Ordinance No. 181,480 referred to as the "Los Angeles Green Building Code." This Ordinance amended Chapter IX of the Los Angeles Municipal Code (LAMC) by adding a new Article 9 to incorporate various provisions of the 2010 CALGreen Code. Projects filed on or after January 1, 2011, must comply with the Los Angeles Green Building Code and comply with various provisions of the 2010 CALGreen Code. The provisions of the Los Angeles Green Building Code apply to the construction of every new building, every building alteration with a building permit valuation of over $200,000 and every building addition throughout the City of Los Angeles unless otherwise stated in the Los Angeles Green Building Code. Specific mandatory requirements and elective measures are provided for three categories: (1) low-rise residential buildings; (2) nonresidential and high-rise residential buildings; and (3) additions and alterations to nonresidential and high-rise residential buildings. The City's checklists for each of the categories are provided in Appendix E.2 of this Draft EIR. Some of the key mandatory measures for newly constructed non-residential buildings include the following:

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[42] *CARB Executive Order G-12-039, www.arb.ca.gov/cc/sb375/exec_order_scag_scs.pdf, accessed March 2, 2015.*

- Construction—Construction waste reduction of at least 50 percent;
- Construction—100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled;
- Transportation Demand—Provide secure bicycle parking for 5 percent of motorized vehicle parking capacity;
- Transportation Demand—Provide designated parking for any combination of low-emitting, fuel-efficient, and carpool/van pool vehicles;
- Energy Conservation—Provide electric vehicle supply wiring for a minimum of 5 percent of the total number of parking spaces;
- Energy Conservation—Each appliance provided and installed shall meet Energy Star if an Energy Star designation is applicable for that appliance;
- Renewable Energy—Provide future access, off-grid prewiring, and space for electrical solar systems;
- Water—A schedule of plumbing fixtures and fixture fittings shall be provided that will reduce the overall use of potable water within the building by at least 20 percent, based on the maximum allowable water use per plumbing fixture and fittings as required by the California Building Standards Code; and
- Wastewater—Each building shall reduce wastewater by 20 percent based on the maximum allowable water use per plumbing fixture and fittings as required by the California Building Standards Code.

On December 17, 2013, the Los Angeles City Council approved Ordinance No. 182,849, which amended certain provisions of Article 9 to reflect local administrative changes and incorporating by reference portions of the 2013 CALGreen Code. Projects filed on or after January 1, 2014, must comply with the Los Angeles Green Building Code as amended to comply with various provisions of the 2013 CALGreen Code. Specific mandatory requirements and elective measures are provided for three categories: (1) low-rise residential buildings; (2) nonresidential and high-rise residential buildings; and (3) additions and alterations to nonresidential and high-rise residential buildings.

(c) City of Los Angeles General Plan

The City of Los Angeles does not have a General Plan Element specific to Global Warming and GHG emissions. However, the following five goals from the Air Quality Element of the City of Los Angeles General Plan would also serve to reduce GHG emissions:

- Less reliance on single-occupant vehicles with fewer commute and non-work trips;

- Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand-management techniques;

- Minimal impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation and air quality;

- Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels and the implementation of conservation measures including passive measures, such as site orientation and tree planting; and

- Citizen awareness of the linkages between personal behavior and air pollution and participation in efforts to reduce air pollution.

(d) Traffic Study Policies and Procedures

The City of Los Angeles Department of Transportation (LADOT) has developed the Traffic Study Policies and Procedures (TSPP) in order to provide the public, private consultants, and City staff with standards, guidelines, objectives, and criteria to be used in the preparation of a traffic impact study. In December of 2010, LADOT provided an update to the TSPP that emphasized the importance of sustainability, smart growth, and reduction of GHG emissions in addition to traditional mobility consideration when evaluating and mitigating impacts to the City's transportation system as a result of land use policy decisions. The updated edition of the TSPP prioritizes TDM strategies and multi-modal strategies over automobile-centric solutions when mitigating project-related impacts to the City's transportation system. By acknowledging reduction of vehicle miles travelled as a policy goal, the TSPP stands as an implementing mechanism of the City's strategy to conform to the mandates and requirements of AB32 and SB375.